

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
10 February 2005 (10.02.2005)

PCT

(10) International Publication Number  
**WO 2005/013641 A1**

(51) International Patent Classification<sup>7</sup>: **H04R 1/04, 19/04**

[KR/KR]; 527-1006, Doduri Maeul Daedong Apt., Jakjeon 3-dong, Gyeyang-gu, Incheon 407-713 (KR).

(21) International Application Number:  
**PCT/KR2003/001758**

(74) Agents: **GAM, Dong-Hoon et al.**; No.201, New Seoul Building, 828-8, Yeoksam-dong, Kangnam-gu, Seoul 135-080 (KR).

(22) International Filing Date: 29 August 2003 (29.08.2003)

(25) Filing Language: Korean

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(26) Publication Language: English

(30) Priority Data:  
10-2003-0052193 29 July 2003 (29.07.2003) KR

(71) Applicant (*for all designated States except US*): **BSE CO., LTD.** [KR/KR]; 869-3, Jakjeon 1-dong, Gyeyang-gu, Incheon 407-820 (KR).

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(72) Inventors; and

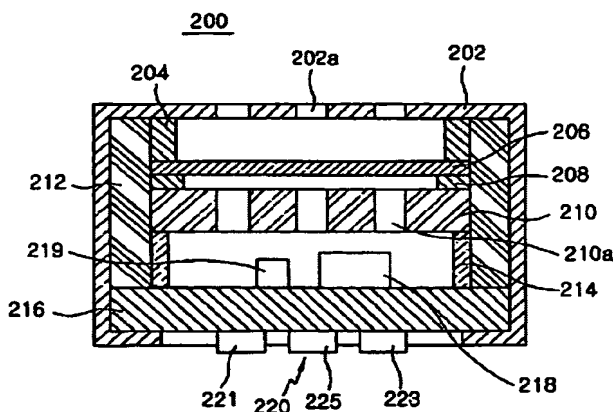
(75) Inventors/Applicants (*for US only*): **SONG, Chung-Dam** [KR/KR]; 236-6, Gayang 1-dong, Gangseo-gu, Seoul 157-801 (KR). **CHUNG, Eek-Joo** [KR/KR]; 206-1906, Cheongsong Maeul Hyundai Apt., Janggi-dong, Gimpo-si, Kyunggi-do 415-748 (KR). **KIM, Hyun-Ho** [KR/KR]; 508-1607, Doduri Maeul Dongbo Apt., Jakjeon 3-dong, Gyeyang-gu, Incheon 407-772 (KR). **PARK, Sung-Ho**

Published:

— with international search report

[Continued on next page]

(54) Title: **SURFACE MOUNTABLE ELECTRET CONDENSER MICROPHONE**



(57) **Abstract:** Disclosed is an electret condenser microphone capable of surface mounting which has a structure highly resistant to high temperature. The electret condenser microphone comprises a case, a polar ring, a diaphragm, a spacer, a back-plate, a first base, a second base and a printed circuit board (PCB), wherein the first base surrounds the diaphragm, the spacer and the back-plate, so that the first base prevents characteristics of an electret formed on any one of the diaphragm and the back-plate from being deteriorated in a reflow process for surface mounting. Further, in order to prevent sensitivity of the electret condenser microphone from being lowered due to decrease of an electrical potential value of the electret in the reflow process. High gain IC devices are used. The electret condenser microphone capable of surface mounting can be obtained by, first, using main components made from a high-temperature resistant insulating material, for example, a polymer-, a plastic- or a fluoro resin-based material, second, constructing the first base to surround acoustic based components, third, using a cream solder for high temperature to bond components to the PCB, fourth, using the high gain IC devices, fifth, providing the connecting terminal with gas discharge grooves and protruding the connecting terminal to be higher than a curled surface of the electret condenser microphone.